



## Product Information

**SAMSUNG TFT-LCD**

**MODEL NO. : LTN121X1-L01**

**SAMSUNG ELECTRONICS CO. LTD.**

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## GENERAL DESCRIPTION

### DESCRIPTION

LTN121X1-L01 is a color active matrix TFT (Thin Film Transistor) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching devices. This model is composed of a TFT LCD panel, a driver circuit and a backlight system. The resolution of a 12.1" contains 1,024 x 768 pixels and can display up to 262,144 colors. 6 O'clock direction is the Optimum viewing angle.

### FEATURES

- Thin and light weight
- High contrast ratio
- XGA ((1024x768) pixels) resolution
- Low power consumption
- DE (Data enable) only mode.
- 3.3V LVDS (FPD Link) Interface with 1 pixel / clock

### APPLICATIONS

- Notebook PC and desktop monitors
- Display terminals for AV application products
- Monitors for Industrial machine
- If the usage of this product is not for PC application, but for others, please contact SEC

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## GENERAL INFORMATION

ITEM	SPECIFICATION	UNIT	NOTE
Display area	245.76(H)X184.32(V) (12.1"diagonal)	mm	
Driver element	a-Si TFT active matrix		
Display colors	262,144		
Number of pixel	1024 x 768	pixel	
Pixel arrangement	RGB vertical stripe	mm	
Pixel pitch	0.240(H) x 0.240(V) (TYP.)		
Display Mode	Normally white		
Surface treatment	HAZE (25), HARD-COATING (3H)		

## Mechanical Information

ITEM	MIN.	TYP.	MAX.	NOTE
Module size (mm)	Horizontal (H)	260.5	261.0	261.5 mm
	Vertical (V)	198.5	199.0	199.5 mm
	Depth (D)	4.9	5.2	5.5 mm
Weight	-	380	396	g

# INPUT Interface Connection

## LVDS

Connector : DF-19L-20P-1H(Hirose)

PIN NO	SYMBOL	FUNCTION	POLARITY	REMARK
1	VDD1	POWER SUPPLY +3.3V		
2	VDD2	POWER SUPPLY +3.3V		
3	GND1	GROUND		
4	GND2	GROUND		
5	RxIN0-	LVDS Differential Data INPUT	Negative	R0~R5 G0
6	RxIN0+	LVDS Differential Data INPUT	Positive	
7	GND3	GROUND		
8	RxIN1-	LVDS Differential Data INPUT	Negative	G1~G5 B0~B1
9	RxIN1+	LVDS Differential Data INPUT	Positive	
10	GND4	GROUND		
11	RxIN2-	LVDS Differential Data INPUT	Negative	B2~B5,DE Hsync,Vsync
12	RxIN2+	LVDS Differential Data INPUT	Positive	
13	GND5	GROUND		
14	RxCLKIN-	LVDS Differential Data INPUT	Negative	
15	RxCLKIN+	LVDS Differential Data INPUT	Positive	
16	GND6	GROUND		
17	NC	No Connection		
18	NC	No Connection		
19	GND7	GROUND		
20	GND8	GROUND		

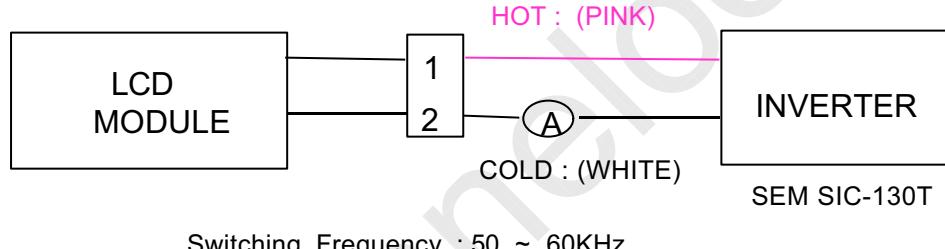
## BACK-LIGHT UNIT

The backlight system is an edge - lighting type with a single CCFT.

T<sub>a</sub> = 25 ± 2 °C

ITEM	SYMBOL	MIN.	MAX.	UNIT	NOTE
Lamp Current	I <sub>L</sub>	3.0	6.5	mArms	(1)
Lamp frequency	F <sub>L</sub>	50	60	kHz	(1)

Note 1) Permanent damage to the device may occur if maximum values are exceeded  
Functional operation should be restricted to the conditions described under normal operating condition



Connector : JST BHSR - 02VS -1  
Mating Connector : SM02B-BHSS-1(JST)

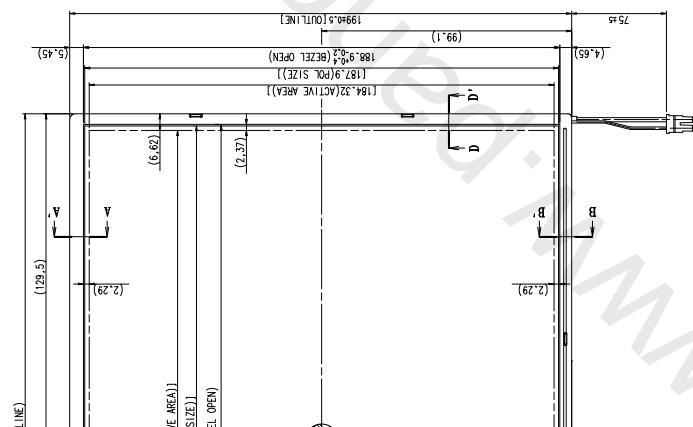
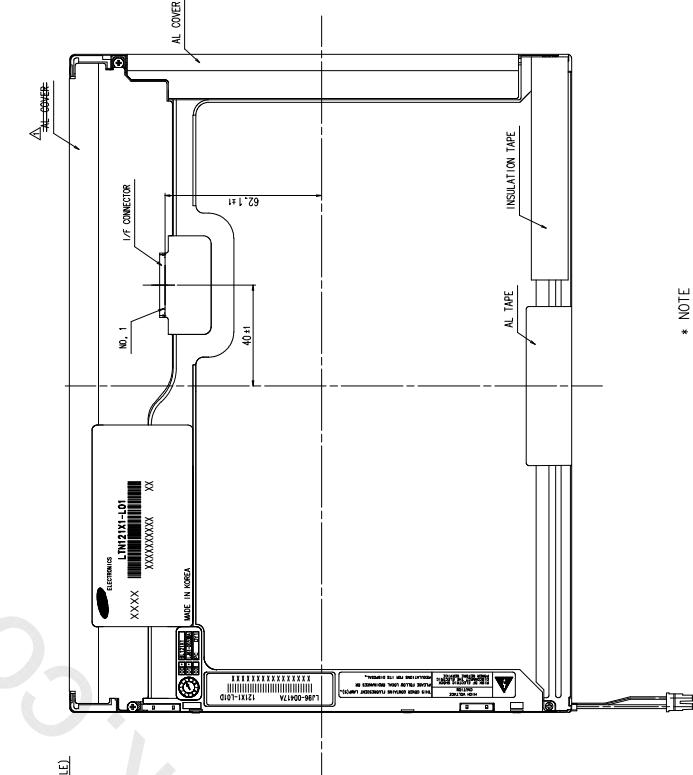
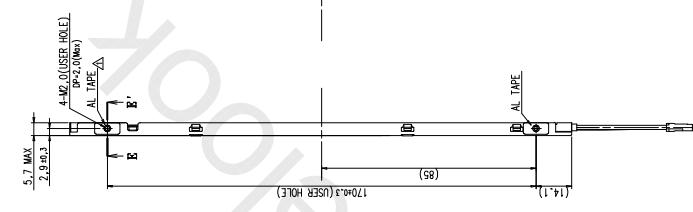
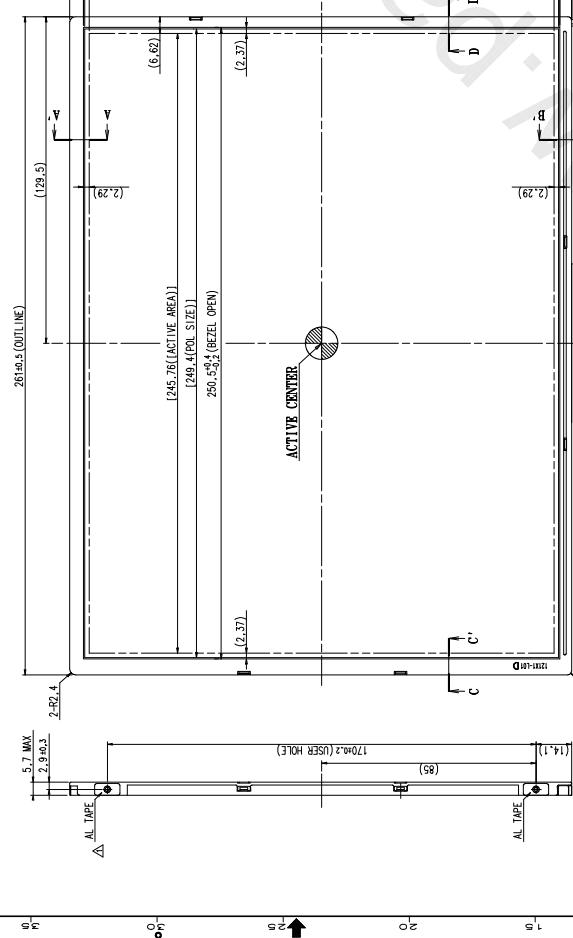
### BACKLIGHT CONNECTOR PIN CONFIGURATION

Pin NO.	Symbol	Color	Function
1	HOT	Pink	High Voltage
2	COLD	White	Ground

FILE NO.	NO.	PART NAME	CODE NO.	SPECIFICATION	Q.TY	WEIGHT	SHLD. P.	REMARK



SECTION A-A' SECTION B-B' SECTION C-C' SECTION D-D' SECTION E-E'



\* NOTE

1. SIGNAL INTERFACE CONNECTOR TO BE SPECIFIED AS BELOW.
  - MAKER : THROE
  - PART NO : BFI-1-20D-TH
  - INPUT MATCHING CONNECTOR : DFI-20S-1SD
2. CCF CONNECTOR FOR BACKLIGHT TO BE SPECIFIED AS BELOW.
  - MAKER : IST
  - PART NO : HSIS-02VS-1
  - OUTLINES ON MEASURING METHOD
  - FORCE : 750-250g (by : caliper)
3. ALLOWED DEPTH OF USERHOLE SCREW INSERTION IS 2mm MAX.

STEP	GENERAL TOLERANCE		CHANGE OF DRAWING & DATE			SOLUTION OF DR. PULLING		S.H.L.F.
	LEVEL	LEVEL 2	REV.	DATE	REASON	REASON	REASON	
0 < x < 4	30.05	30.1	10.1	10.2	1/1	Y.B.CU	J.H.WN	LIN012X1-001
4 < x < 16	40.05	40.1	10.1	10.2	1/1	Y.B.CU	J.H.WN	LIN012X1-001
16 < x < 64	50.05	50.1	20.25	20.5	1/1	Y.B.CU	J.H.WN	LIN012X1-001
64 < x < 256	60.05	60.1	30.25	30.4	1/1	Y.B.CU	J.H.WN	LIN012X1-001
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